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ABSTRACT

The Youth in Transition Survey (YITS) is a longitudinal survey that was developed over a 3-year period by Human Resources Development Canada (HRDC) and Statistics Canada in consultation with provincial and territorial ministries and departments of labor and education. The YITS is designed to provide policy-relevant information about school-to-work transitions and factors influencing pathways among education, training, and work. The YITS' implementation plan encompasses a longitudinal survey for each of two cohorts, ages 15 and 18-20, to be surveyed every 2 years. The sample design for the 15-year-old cohort is a school-based frame allowing selection of schools and then individuals within schools. The sample design for the cohort aged 18-20 is similar to that of Canada's Labour Force Survey. The survey questions examine factors influencing respondents' academic achievement and educational and career aspirations and outcomes. Pilot surveys and interviews for the younger and older cohorts were conducted in April-May and January-February 2000, respectively. Data for the YITS will be collected through computer-assisted telephone interviewing. Primary results from both age cohorts are expected to be available in late 2001. (Addresses of eight project contacts are listed. Lists of the HRDC project advisory panel and 154 references are appended.) (MN)

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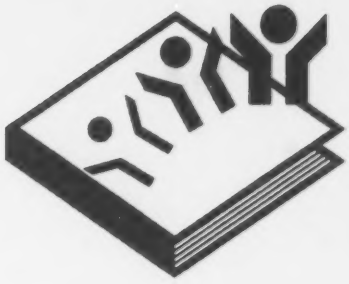

Project Overview

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Applied Research Branch
Strategic Policy
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Direction générale de la recherche appliquée
Politique stratégique
Développement des ressources humaines Canada

Youth in Transition Survey

Project Overview

T-00-5E

September 2000

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This paper is also available in French under the title "Enquête auprès des jeunes en transition – Aperçu du projet."/ La version française du présent document est disponible sous le titre « Enquête auprès des jeunes en transition – Aperçu du projet ».

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Abstract

The Youth in Transition Survey (YITS) is a longitudinal survey designed to provide policy-relevant information about school-work transitions and factors influencing pathways among education, training and work.

Over the past three years, Human Resources Development Canada and Statistics Canada have been developing the YITS in consultation with provincial and territorial ministries and departments of labour and education. Content includes measurement of major transitions in young people's lives including virtually all formal educational experiences and most labour-market experiences. Factors influencing transitions are also included family background, school experiences, achievement, aspirations and expectations, and employment experiences. The implementation plan encompasses a longitudinal survey for each of two cohorts, ages 15 and 18-20, to be surveyed every two years.

Cycle 1 of YITS (for the cohort aged 15) was integrated with the Programme for International Student Assessment (PISA), a project of the Organisation for Economic Co-operation and Development (OECD). The OECD/PISA project was conducted through a partnership with the Council of Ministers of Education, Canada, and provincial ministries and departments of education.

The sample design of the 15-year-old cohort is a school-based frame that allows the selection of schools, and then individuals within schools. This design will permit analysis of school effects, a research domain not currently addressed by other Statistics Canada surveys. Data collection for cycle 1 took place in April-May 2000. A pilot survey was conducted in April 1999 and the main survey took place in April-May 2000. Interviews were conducted with 30,000 students from 1,000 schools in Canada. A telephone interview with parents of selected students took place from June to August 2000.

The sample design for the cohort aged 18-20 is similar to that of the Labour Force Survey. The method of data collection is computer-assisted telephone interviewing. In January-February 2000, 23,000 youth participated in the first survey cycle.

Preliminary results from both age cohorts are expected to be available in late 2001. Following the release of the first international report by the OECD/PISA project and the first national report, data will be publicly available, permitting detailed exploration of content themes.

Résumé

L'Enquête auprès des jeunes en transition (EJET) est une enquête longitudinale conçue pour recueillir des renseignements stratégiques pertinents sur les transitions liées au milieu scolaire et au marché du travail que vivent les jeunes, ainsi que sur les facteurs qui influent sur les cheminements dans le contexte des études, de la formation et du travail.

Au cours des trois dernières années, Développement des ressources humaines Canada et Statistique Canada ont travaillé à la mise au point de l'EJET, en consultation avec les ministères du Travail et de l'Éducation des provinces et des territoires. L'enquête inclut la mesure des transitions majeures dans la vie des jeunes, y compris à peu près toutes les expériences d'études formelles et la plupart des expériences sur le marché du travail. Elle inclut aussi les facteurs influant sur les transitions : contexte familial, expériences scolaires, réalisations, aspirations et attentes, et expériences sur le marché du travail. Le plan de mise en oeuvre prévoit une enquête distincte, tous les deux ans, pour deux cohortes d'âge : les 15 ans et les 18-20 ans.

Le cycle 1 de l'EJET visant le groupe des 15 ans a été intégré au Programme international pour le suivi des acquis des élèves (PISA), un projet mené par l'Organisation de coopération et de développement économiques (OCDE). Le projet PISA/OCDE a été mené en partenariat avec le Conseil des ministres de l'éducation du Canada et les ministères provinciaux de l'Éducation.

Le plan d'échantillonnage de la cohorte des 15 ans est un cadre permettant la sélection d'écoles, puis d'élèves au sein de ces écoles. Ce plan permettra d'analyser l'incidence de l'école, que n'analyse présentement aucune autre enquête de Statistique Canada. La collecte de données pour le premier cycle a eu lieu en avril et mai 2000. Les entrevues ont été effectuées auprès de 30 000 étudiants de 1 000 écoles au Canada. De juin à août 2000, des parents d'étudiants ont également répondu à une entrevue téléphonique.

Le plan d'échantillonnage de la cohorte des 18-20 ans est semblable à celui de l'Enquête sur la population active qui est axée sur les ménages. Les données sont recueillies au moyen d'entrevues assistées par ordinateur. En janvier et février 2000, 23 000 jeunes ont participé au premier cycle de l'enquête.

Des résultats préliminaires sur les deux cohortes d'âge devraient être disponibles à la fin de 2001. Suite à la publication du premier rapport international par l'équipe du projet PISA/OCDE et du premier rapport national, les données seront disponibles publiquement permettant ainsi l'exploration détaillée de certains thèmes de recherche.

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1. Introduction

The skills profiles needed for jobs are changing as the century turns, due to a shift in employment from manufacturing to services, the wide diffusion of information and communication technologies and the gathering momentum of globalization. These fundamental changes have affected the Canadian labour market and will continue to have a major impact on the nature and availability of work in Canada.

Technological change and the "information revolution" are identified in the report of the Policy Research Committee (1996) as among the most important forces that will impact economic and social development over the next decade. In recent research, the Applied Research Branch of Human Resources Development Canada has confirmed a trend in the pattern of employment favouring high-skilled workers that is rapid and widespread across all industrial sectors (Lavoie and Roy, 1998).

The pattern of life-course transitions is also changing. Many life events traditionally viewed as discrete occurrences are now more appropriately categorized as processes. Young adults may leave home and then return again, sometimes several times (Mitchell and Gee, 1996). Delayed marriage, common-law unions and divorce have made the transition to and from married status less clear (Skolnick, 1998). Even retirement is not necessarily a one-time event (McPherson, 1990).

Movements between school and work are also changing. More and more people may move back and forth between a status of primarily student or primarily worker or combine both school and work in an effort to support their life goals (Krahn, 1996). Hence, the term "school-work" transitions is used to describe this process, rather than the more common terminology of "school-to-work" transitions. Recent work by the Applied Research Branch of Human Resources Development Canada has stressed the importance of lifelong learning as a determinant of long-term growth in a knowledge-based economy and as an approach to achieving better labour market integration.

Canada's long-term economic and social potential depends on the encouragement of successful school-work transitions among youth. In Canada, the Youth in Transition Survey (YITS) has

been developed by Human Resources Development Canada and Statistics Canada in consultation with Provincial and Territorial Ministries and Departments of Labour and Education, in part to understand how young people manage school-work transitions in the context of economic and social change. YITS is a longitudinal survey designed to provide policy-relevant information on school-work transitions and on factors influencing pathways. YITS will provide a vehicle for future research and analysis of major transitions in young people's lives, particularly those between education, training and work. Information obtained from, and research based on, the survey will help clarify the nature and causes of short and long-term challenges young people face in school-work transitions, and support policy planning and decision making to prevent or remedy these problems.

This document first presents the policy issues that led to the development of the project. It describes the consultations that took place with stakeholders having an interest in youth development and school-work transitions, and summarizes consultation recommendations. It presents a short overview of the objectives of the survey and its design. It presents information about the integration of the 15-year-old cohort with the Programme for International Student Assessment. The content of the survey is described and placed into context through a review existing literature on selected themes relevant to school-work transitions. Examples of possible research questions that could be addressed with data from the survey are presented. An overview of the methodology and implementation of the survey is also provided, as well as information on data availability.

2. Policy Context

The importance of initial education for individuals and for societies is well recognized. Modern societies invest a substantial proportion of their resources in the education of youth. Still, there are concerns about the adequacy of public resources spent on initial education. For instance, the level and the type of investment in initial education is questioned in the context of an increasingly knowledge-based economy, where labour-market demand for individuals with broad and highly transferable skills is rising. These questions are central to policies and programs needed to support growth of standards of living and also to ensure greater social cohesion. In this context, our understanding of the precise economic and social contribution of education will be key to future public policy formulation.

> To adjust to the information age…"Canada will need to upgrade the skills and education of its workforce and make the management of knowledge a priority for individuals, firms, governments, and other institutions."
>
> *Policy Research Committee, Draft, Interim Report, 1996.*

First, to help policy makers judge the relative desirability of different strategies for investing in initial education, we need more information on the costs and benefits of initial education for individuals and society at large. Learning more about the costs and benefits to education, in particular how they vary across sub-groups of the youth population, will lead to a better understanding of the factors that influence the level and distribution of initial education in the youth population. This information should also be complemented with increased research to better assess the positive externalities resulting from investment in education (i.e., crime reduction, better health).

Second, and perhaps one of the most critical issues for policy makers, is the seemingly inequitable state of affairs resulting from the unequal level of investment in initial education among youth. The unequal distribution of schooling among youth is sometimes suggested as evidence of a socially sub-optimal level of investment in initial education. The underlying assumption is that some youth should invest more in education than they actually do because the benefits to them and to society would be larger than the costs.

Demand and supply-side factors may, however, prevent the youth from doing so. Their abilities, attitudes, motivations, and expectations can be viewed as demand factors to be considered while taking into account their community or family constraints. Supply-side factors including financial factors (e.g., liquidity constraints, tuition fees, debt load), quantity rationing by schools (e.g., number of seats in trade-vocational programs), and inadequate programs could constitute barriers that will prevent youth from participating in education.

A third crucial element affecting Canada's long-term economic and social potential is the integration process of young people into the labour market. According to the OECD report *From Initial Education to Working Life: Making Transitions Work*, specific transition policies may be needed to ensure that young people do not enter the labour market unprepared (OECD, 2000). As well, special programs and policies may be needed to help youth find the jobs they want.

For many youth, the transition from school to work is no longer a simple linear process. For instance, youth are often attending school and working at the same time, or returning to school after starting out in the workforce, or moving between a number of part-time or temporary jobs before entering into a more stable employment relationship.

> The review has highlighted the weaknesses of many existing data collections in providing indicators of trends and problems in the transition from education to work. In general, the available data are stronger in describing patterns of participation in education, and to a lesser extent movement through the education system, than they are in describing movement into and through the labour market…Available data on transition outcomes needs to be broadened and refined beyond traditional unemployment rates, and indicators need to be developed that can provide a better picture of the process by which young people move through initial education to working life and of the impact which different types and levels of educational achievement have on labour market outcomes.
>
> *From Initial Education to Working Life: Making Transitions Work, OECD 2000.*

With such variable patterns, a survey that tracks the progress of youth over time is a key instrument in helping to identify the factors that may prevent the successful integration of youth in the labour market. It is important to start collecting information about students before they have begun their transition process, and to follow their progress through the education system (i.e., their educational pathways) and into the labour market for several years. In addition to

following youth over a number of years, the Youth in Transition Survey will also collect information on a number of factors that might influence school-work transitions like school policies and practices, family and community background, youth's attitudes, aspirations, and expectations.

In summary, the Youth in Transition Survey will be an important instrument for research on the costs and benefits of initial education for individuals and society at large and the diversity of pathways followed.

3. Consultation on Information Needs

The Youth in Transition Survey reflects the needs of many parties. To determine the demand for a survey of this type and the objectives that it should address, an extensive consultation was conducted in both 1996 and 1997. Focus groups were held across the country with stakeholders having an interest in youth and school-work transitions. Consultation participants included representatives from federal government departments with an interest in youth policy, provincial ministries and departments of education and labour, practitioners working directly with youth (teachers, counsellors, school board personnel and social workers), employers, business and education associations, academic researchers, youth, and parents.

Two overall conclusions were reached at the completion of the consultations. First, participants were enthusiastic and there was a great deal of interest in the topic of youth and school-work transitions. The second conclusion refers to the type of information required by participants. A survey of youth and school-work transitions needs to gather explanatory information that explores the relationships between various factors and the school-work transition process. A survey of youth should not only ask "what are they doing?" but also "why are they doing it?," "how are they doing it?" and "what effect does what they are doing have?"

The following table summarizes the consultations which took place.

February 1996	In preparation for planned consultations on YITS, HRDC commissioned Sid Gilbert, of the Centre for Educational Research and Assessment at the University of Guelph, to prepare a paper describing the intent, issues and constraints surrounding the School Leavers and its follow-up Survey. ***Report title: School Leavers Consultation Paper, February 1996***
March 1996	HRDC commissioned Harvey Krahn of the University of Alberta to prepare a report on issues and research needs in the area of school-work transitions. ***Report title: School-Work Transitions: Changing Patterns and Research Needs, March 1996***

February 8 - March 19, 1996	The Questionnaire Design Resource Centre (QDRC) of Statistics Canada was asked to conduct a series of consultations in each Canadian province with people involved in policy planning, research and decision-making in areas related to youth and school-work transitions. The purpose of the consultation was to determine immediate and future data needs and to identify the type of information that would be beneficial for policy planning and decision-making. Eleven meetings took place across Canada with representatives from provincial ministries and departments of education, skills and training, and social services, school boards, HRDC regional offices involved in youth services and employment counselling and other organizations and institutions with interests in youth and school-work transitions. ***Report title: Report on Provincial Consultations in Preparation for Future Surveys on Youth and School-Work Transitions, April 1996***
April 1996	Members of HRDC's Advisory Panel of Experts on Youth and Learning were consulted for the same purpose as above. ***Report title: Academic Consultations: Youth and School-Work Transitions, April 17, 1996***
April 1996	Federal Departments with an interest in youth policy were consulted for the same purpose as above. ***Report title: Federal Consultations: Youth and School-Work Transitions, April 1996*** A summary report of all the above mentioned provincial, federal and academic consultations is available. ***Report title: Summary Report: Consultations on Youth and School-Work Transitions, April 1996***
January 1997	On behalf of Statistics Canada and Human Resources Development Canada, Price Waterhouse conducted 21 focus groups with youth aged 14 to 20 and parents of youth aged 14 to 20 in six Canadian cities in January 1997. The purpose of the focus groups was to gain a better understanding of the issues facing young people in the education system and labour market. ***Report title: Focus Groups with Youth and Parents in Preparation for Future Surveys on Youth and School-Work Transitions, Final Report***
March 1997	A "brainstorming" session was held with analysts from various divisions of Statistics Canada that deal with youth in transition issues. The purpose was to obtain information on current youth in transition projects and to identify data gaps in this area.
July 1997	Members of HRDC's Advisory Panel of Experts on Youth and Learning commented on the February 1997 report and provided further examples of relevant literature.

September 1997	Two video conferences were held with the developers of the American National Longitudinal Survey of Youth. The purpose was to share information/advice on the procedures and content of longitudinal youth surveys.
Winter 1997	A presentation of YITS objectives was made to the HRDC Labour Market Research Forum.

Although each series of consultations was made up of individuals with varying interests, the following themes were identified.

- A survey of youth and school transitions needs to include multiple indicators to determine what a successful transition is, such as life satisfaction, self-worth, ability to become a productive member of society, general health and citizenship.
- Youth's expectations, aspirations and plans should be explored across a variety of dimensions including the match between expectations and reality, career expectations, labour-market expectations, and education and learning expectations.
- Effort should be made to discover which school processes and structures are effective in school-work transitions and to determine the value of an education.
- Information on perceived and actual barriers to post-secondary education and labour-market entry should be included.
- The study should inquire about youth's access to information for education and career planning.
- The influence of the family in school-work transitions should be explored including the incidence and effects of staying an extended time in the parental home or returning to the nest, the effects of parental decision-making, parents' attitudes toward further education and the family environment in which a young person lives (such as finances, parental involvement and support).
- Information on the effects of various types of work-experience programs on youth's transition to the labour force is needed.
- The impact of volunteer work on youths' transition to the labour force should be explored.

- There is a requirement for data on youth combining school and work and examining the relationship between this work and future jobs, choosing a career or education program, networking, educational funding and school retention.

- There is interest in obtaining information on whether youth have the right skills for the labour market, the match between skills required by employers and those obtained in schools, how and where youth acquire skills and the difference between academic and social skills.

- Information should be collected on factors that may explain why youth do not complete high school.

- Quality of life indicators should be explored including: social development, self-esteem, resiliency, coping abilities, satisfaction with life, realization of expectations, general health, mental health, life chances, support systems, relationships, living conditions, family responsibilities, expenditures, debt, involvement in extra-curricular activities, transportation problems, attitudes toward unemployment insurance and welfare benefits, and student assistance programs.

4. Survey Objectives

Flowing from the policy issues and information needs raised as the impetus for the project and defined by the YITS consultations are the following 10 objectives of the Youth in Transition Survey.

1. To examine key transitions in the lives of youth, such as the transition from high school to post secondary schooling and the initial transition from schooling to the labour market.

2. To better understand educational and labour market pathways and the factors influencing these pathways.[1]

3. To identify educational and occupational pathways that provide a smoother transition to the labour market.

4. To examine the incidence, characteristics, factors, and effects of leaving school.

5. To understand the impact of school effects on educational and occupational outcomes.

6. To examine the contribution of work experience programs, part-time jobs, and volunteer activities to skill development and transition to the labour market.

7. To study the attitudes, behaviours, and skills of young people entering the labour market.

8. To gain a better understanding of the determinants of post- secondary entry and post-secondary retention, including education financing.

9. To better understand the role of educational and labour market aspirations and expectations in investment in further education and career choice.

10. To explore the educational and occupational pathways of various sub-groups, particularly youth "at risk."

[1] See section 7.3: factors influencing transitions and chapter 8: factors influencing transitions – literature review.

5. Project Design

5.1 A longitudinal survey

The nature of the information needs identified following the consultations on YITS and resulting survey objectives led to a need for a survey that could track the dynamics of youth development over several years.

To go beyond measurement of outcomes to understand why outcomes have been achieved requires a comprehensive framework that includes measurement of transition processes, the duration of transitions, the context in which transitions take place and the link between transitions and outcomes. A framework that covers these various dimensions calls for longitudinal data where the experiences of individuals can be tracked over time.

Without a longitudinal survey, retrospective interviews would be required to collect the information needed to address survey objectives. Such methods are associated with errors resulting from recall bias. With a longitudinal survey, respondents are interviewed frequently and are required to recall only recent events, thus improving data quality. Reports of attitudes and motivations for a behaviour, for example, would be quite different if measured retrospectively and with hindsight than they would be if measured close to the time a behaviour occurs.

Through the linkage of individual records over time from the same panel, a longitudinal survey permits the study of relationships between factors measured in one period, such as achievement, aspirations, and behaviours, and outcomes measured in future time periods. To reduce recall bias, YITS respondents will be interviewed every two years.

Statistics Canada has successfully implemented several longitudinal social surveys including the National Longitudinal Survey of Children and Youth. The U.S. Department of Labour National Longitudinal Survey of Youth and the U.S. Department of Education National Educational Longitudinal Study also measure educational and other life experiences with a longitudinal survey vehicle. The data quality and research possibilities evidenced by these surveys contributed to the decision to adopt a longitudinal approach for YITS.

5.2 Two entry cohorts: ages 15 and 18-20

YITS is intended to provide longitudinal data that will allow analysts to study school-work transitions of young people and the factors that influence such transitions. Of importance is the need for an in-depth understanding of the experiences of youth within the secondary schooling system, the formation of educational and occupational aspirations, the effect of schools on educational and occupational outcomes, the impact of various activities (volunteer work, part-time work, participation in work experience programs) on transitions, the progression to further schooling and/or the labour market and subsequent transitions.

A longitudinal survey that begins with an exploration of experiences during adolescence, however, will not provide information to inform issues of immediate policy concern, such as high-school retention, accessibility of post-secondary education, post-secondary retention, and school-work transitions of youth "at-risk" until several survey cycles have passed. As a result, Cycle 1 of YITS begins with both a cohort of adolescents and a cohort of young adults.

Youth aged 15

Age 15 was selected as the most appropriate for the adolescent cohort. At age 15, many youth into high school, thinking about working part-time, beginning to develop education and career aspirations and beginning to establish some independence from parents.

One objective of YITS is to understand the impact of high school effects on educational and occupational outcomes. To explore high-school effects, it is necessary to begin the survey while youth are attending high school. The typical age at which youth begin high school, however, varies by province and territory. Because of variation across the country, age 15 is the best choice for capturing the largest proportion of youth early in their high school years.

Age 15 also permits integration of YITS with the OECD Programme for International Student Assessment (PISA). This international study of youth competencies in reading, science and mathematics is administered to youth aged 15, in over 30 countries (see chapter 7: integration with the OECD Programme for International Student Assessment).

Youth aged 18-20

The age group 18 to 20 was selected as the most appropriate for the young adult cohort. In Canada, most youth enter their final year of secondary school at age 17 and by age 18 are making a transition to either post-secondary education or the labour-market. In Ontario, under the current educational system, students may make these transitions one year later. In Quebec, students typically make a transition to CEGEP (college level) at age 17 and by age 19 make a transition to university or the labour-market. Including 18 and 19 year-olds in the young adult cohort will permit gathering of information on early post-secondary experiences with limited chance of recall bias. Age 20 was chosen as most appropriate for the calculation of provincial and national estimates of the secondary school leaver rate at the time of the 1991 School Leavers Survey. Including age 20 in this cohort will enable more immediate updating of the 1991 school-leaver rate.

5.3 Parents and school administrators

While youth are the focus of the YITS inquiry, Cycle 1 for the cohort aged 15 also includes questionnaires for both parents and school administrators of participating youth.

To measure the impact of high school effects on educational and occupational outcomes, information about the schools youth are attending is required. This information will be collected during Cycle 1 for the cohort aged 15 from School Administrators via the PISA School Administrator's Questionnaire. This questionnaire is then supplemented with a limited number of additional questions specific to the measurement of school-work transitions, as a national option.

The requirement of YITS to explore factors influencing school-work transitions necessitates gathering information about family background. Cycle 1 for the cohort aged 15 will include a telephone interview with parents.

For older youth, such as those beginning participation in YITS at ages 18-20 or future cycles of YITS for the cohort entering at age 15, a school administrator and parent interview would be of less utility and less practical. This is because, at age 17 or older, increasing proportions of youth will have left secondary schooling and the parental home.

5.4 A school-based frame and household frame

One of the objectives of YITS is to examine school effects, that is to assess the contribution of schools to student outcomes, to evaluate school practices and to determine the extent to which attending a particular school modifies students' outcomes. The measurement of school effects has major implications for survey design. The survey must target schools as the primary sampling unit and obtain a large enough sample of youth within those schools to make the school-effects modelling procedure viable (see chapter 8: factors influencing transitions and chapter 10: methodology and implementation).

It is important that the frame from which the sample is selected provides as complete a list of the age cohort as possible. In this regard, a school-based frame is not without limitations. As data collection took place in the spring, Ministries and Departments of Education were asked to provide on enrollment during the fall term. At that time, however, Ministries and Departments were only able to provide information on school enrollment of youth aged 15 for the previous school year. In addition, in two provinces, data on enrollment by age was unavailable and information on enrollment by grade level was provided instead. In order to make use of this information, data from Statistics Canada administrative surveys was used to model the relationship between age and grade level.

Aside from these limitations, a school-based frame is expected to provide a reasonably complete listing of youth aged 15. This is because youth, with some exceptions, are legally required to be enrolled in school until age 16. From age 16 onward, such a frame would exclude early school leavers.

Some school leaving may occur, however, before age 16. According to the 1991 School Leavers Survey, 14% of school leavers reported leaving at age 15 (Table 1). The School Leavers Survey, however, relied on self-reported data. As a result, we do not know if age 15 represented the age of final departure from schooling or the point where youth began to disengage themselves from school. Focus group interviews with youth have indicated that the actual date of departure is difficult to define because leaving school is more of a process than an event. To reduce the possibility that school leaving has already occurred, and thus limit potential bias resulting from an incomplete survey frame, school records were requested during the fall term. This provides an

opportunity to include students who may have left school prior to the PISA assessment, should the main study results warrant such action.

Table 1: **Age of school leavers at the time of leaving school**

Age	Per cent of total leavers
14	3*
15	14
16	21
17	27
18	25
19	7
20	-

* High sampling variability associated with the estimate
Source: *School Leavers Survey*, 1991

The survey of youth aged 18-20 is based on a sample of households. For youth this age, a school-based frame would be inappropriate as most have already made the transition from high school to post-secondary education or the labour-market.

5.5 Upper age bound to be evaluated

"The Canadian model of school-work transitions is one that offers multiple and flexible pathways, with opportunities to return to school and to change direction" (Statistics Canada and Human Resources Development Canada, 1998). It will take many years for the labour-market status of the majority of youth to shift from being primarily students (studying more than working) to being primarily workers (working more than studying). Furthermore, it will take even longer for many youth to become established in the labour-market, enabling examination of career progression. Consultation participants consistently agreed that the survey should extend to age 25, with many requesting ages 28-30 as the upper bound.

As YITS is designed as a longitudinal survey, the panel is intended to be followed for several survey cycles. The upper age bound for YITS will continue to be evaluated as the survey progresses.

6. Integration with the Programme for International Student Assessment (PISA)

6.1 What is PISA?

The Organization for Economic Cooperation and Development (OECD) Programme for International Student Assessment (PISA) is a new initiative designed to provide policy-oriented international indicators of student achievement. PISA assessments cover the domains of reading, science and mathematics, although their central aim is to assess wider knowledge, skills, and competencies embedded in the context of these subject areas. In the first cycle of PISA in 2000, reading will be the major domain because it is a foundation skill on which the development of other competencies depend.

The results of the OECD PISA study will allow national policy makers to compare the achievement of their youth with those of other countries. The results will provide a basis for better assessment and monitoring of the effectiveness of education systems.

PISA consists of the following:

- Two hours of direct skill assessment through reading, math, and science tests. The reading test is based on a new framework that also incorporates items from the International Adult Literacy Survey.
- A 20-minute self-completed contextual questionnaire administered to students to collect background information to help understand the factors contributing to student achievement.
- A 3-minute optional section on Information Technology administered to students.
- A 30-minute self-completed school questionnaire administered to school principals to collect information about characteristics of the school.

The following countries are participating:

Australia	*Denmark*	*Ireland*	*Netherlands*	*Spain*
Austria	*Finland*	*Italy*	*New Zealand*	*Sweden*
Belgium	*France*	*Japan*	*Norway*	*Switzerland*
Brazil	*Germany*	*Korea*	*Poland*	*United Kingdom*
Canada	*Greece*	*Latvia*	*Portugal*	*United States*
China	*Hungary*	*Luxembourg*	*Russian Federation*	
Czech Republic	*Iceland*	*Mexico*		

A consortium of prominent international research organisations is carrying out the project in close co-operation with representatives from each participating country and the OECD. The Australian Council for Educational Research (ACER) heads the Consortium that also includes the following organizations:

Netherlands National Institute for Educational Measurement (Cito); Service de Pédagogie Expérimentale, Université de Liège (SPE), Belgium; and Westat, USA.

The PISA study provides a "snap-shot" exploration of the relative impact of student background, school structure and school processes on observed achievement. The integration of PISA with Cycle 1 of the Youth in Transition Survey builds on the PISA "snap-shot" by enabling exploration of the relationship between tested proficiency and education and labour-market outcomes. The PISA/YITS study will thus provide the knowledge base to enhance collaboration between education and labour-market ministries and departments in support of smoother school-work transitions for Canadian youth.

6.2 Federal-Provincial partnership

In the summer of 1998, Human Resources Development Canada, Statistics Canada, and the Council of Ministers of Education (Canada) developed a proposal to combine Cycle 1 of YITS for the cohort aged 15 with the OECD Programme for International Student Assessment (PISA). This proposal was approved by the Advisory Committee of Deputy Ministers of Education (ACDME) on September 28, 1998.

Under the auspices of the Canadian Education Statistics Council, the combined PISA/YITS is guided by a National Steering Committee composed of representatives at the Assistant Deputy

Minister level from each Provincial Ministry and Department of Education, Human Resources Development Canada and Statistics Canada. Ministries and Departments also have representation on the OECD/PISA project governing body and play an active role in the management and coordination of the project. Both the YITS youth questionnaire and the OECD/PISA questionnaires are administered at school under the authority of Provincial Ministries and Departments of Education. The only exception to this is in Ontario where the PISA/YITS study is administered under the Statistics Act.

In addition to this partnership for YITS Cycle 1, Provincial and Territorial Ministries and Departments of Education guide the development of the YITS project through the Canadian Education Statistics Council (Ministers of Education), Advisory Committee of Deputy Ministers of Education, Strategic Management Committee (Assistant Deputy Ministers of Education), and Provincial Working Group on Quality Improvement of Education Statistics. Provincial and Territorial Ministries and Departments of Labour have a similar role in the YITS project, providing guidance through the Forum of Labour Market Ministers, the Forum of Labour Market Deputy Ministers and the Federal-Provincial Working Group on School-Work Transitions.

7. Survey Content

7.1 Overview

The Longitudinal Survey of Youth in Transition focuses on the educational and career pathways of youth. Information is collected to permit examination of the occurrence and timing of education and labour-market experiences. This information is then enhanced, from a policy standpoint, with information on factors influencing pathways.

Following from the information needs identified as the impetus for the project, those raised during the consultations and an extensive review of the literature on school-work transitions and youth development, school-related and non-school related factors key to explaining early transitions were elaborated for inclusion in the survey instruments.

7.2 Transitions measured

Major life transitions provide a new role or definition of self and involve four key changes: a new set of responsibilities, a change in relationships with others, a change in daily routine and an adjustment of assumptions about oneself or the world (Schlossberg, 1989). A minor life transition may include only one or two of these changes. How individuals manage life transitions depends on many factors including self-esteem, attitude, outlook, coping ability and preparedness.

Transitions measured through YITS include virtually all formal educational experiences and many labour-market experiences. Other transitions, such as leaving the parental home, marriage or common-law unions and the birth of children are also important components. Key school-work transitions include:

- entering post-secondary education,
- post-secondary program and level changes,
- leaving post-secondary schooling (through graduation or dropping out),
- entering the labour market,
- obtaining a first job after leaving full-time schooling,

- changes within and between jobs, and
- activities during spells when not working and not in full-time schooling.

Each stage measured includes a start and end date to facilitate an understanding of the occurrence and timing of events.

7.3 Factors influencing transitions

Factors influencing transitions are many and varied. The determination of factors to be included in YITS was conducted in conjunction with Human Resources Development Canada's Advisory Panel of Experts on Youth and Learning, following the recommendations of the 1996-1997 consultation with stakeholders, and an extensive review of existing literature. The following factors will be measured.

- socio-demographic information
- school effects
- achievement
- school engagement
- parental socio-economic status
- social and cultural capital
- family and custody history
- parental involvement and parenting style
- balancing work, education and family
- education and labour-market aspirations
- career planning
- influence of peers
- disobedient behaviour
- health and psychological functioning
- post-secondary financing
- first year experiences in post-secondary education
- skills

- programs for preparation for work
- volunteer activities
- early employment experiences
- combining school and work
- unemployment
- job quality
- job tenure/mobility
- earnings and reservation wage
- job satisfaction

7.4 Content will adjust as youth age

As YITS is a longitudinal survey, content can be adjusted to appropriately reflect the stage of the life course of youth. While many content themes are relevant to all YITS cycles, the following text outlines YITS content themes that are more appropriate at particular ages.

Youth age 15

Concentration on collection of information that may influence future transitions, including achievement, school experiences, early labour-market experiences, volunteer activities, peer influence, educational and labour-market aspirations, and family background, including family history, parental socio-economic status, parental aspirations and expectations for their youth, and parental views on their youth's school experiences.

Youth ages 17-20

By age 17, some youth will have left secondary schooling and entered the labour-market or progressed to post-secondary education. Some youth will also be establishing independence from parents and leaving the parental home.

Areas explored for this age group will include detail on educational and occupational expectations, aspirations and plans; influences on education and career choice; participation in programs for preparation for work; post-secondary participation; educational program and specialization; first year experiences in post-secondary education; barriers to participation in

post-secondary education; post-secondary financing; detailed information on labour-force participation; career and job-related training; and personal income.

Youth ages 21-29

By age 21, more youth will have made the transition from being primarily a student to being primarily a worker. In addition to continuing with measurement of items included for youth aged 17-20, at this point it would be appropriate to expand measures of perceived value of post-secondary education; to expand measures of career and job-related training; to explore job quality indicators in greater detail; to introduce measures of life-long learning; to assess marriage/family plans and household formation; and to examine the balance between work and family.

7.5 Consultation and testing

Throughout the development process, YITS instruments have been extensively reviewed and improved through consultation with Provincial Ministries and Departments of Education (Deputy Ministers of Education), the Strategic Management Committee (Assistant Deputy Ministers of Education), Provincial Working Group on Quality Improvement of Education Statistics, the HRDC Forum of Labour Market Deputy Ministers, the HRDC Provincial Working Group on School-Work Transitions, the HRDC Advisory Panel of Experts on Youth and Learning, HRDC internal contacts, CMEC contacts in the Canadian Teacher's Federation and Statistics Canada internal contacts. YITS instruments have also been tested through interviews and focus-groups with youth and parents and through the administration of two field-trial tests. The following table summarizes the various reviews and tests of the YITS instruments, excluding the two field trials. The two field trials are described in the next section.

January 1998	A presentation of proposed YITS objectives and content was made to HRDC's Advisory Panel of Experts on Youth and Learning. A first draft questionnaire for the cohort aged 18-20 was distributed for preliminary comments.

February 1998	Members of the Provincial Working Group on Quality Improvement of Education Statistics were asked to support the development of YITS through the provision of information on curriculum, graduation requirements, work experience programs, student evaluation, language immersion programs, peer-oriented programs, teacher qualifications, parent councils and transition programs in their jurisdictions. This information was requested to ensure that the content of the survey is relevant to the provinces.
March -April 1998	To further refine school engagement items for the cohort aged 18-20, consultations were held with Sid Gilbert of the University of Guelph and Peter Dietsche of Humber College.
March - April 1998	The Statistics Canada Questionnaire Design Resource Centre was asked to conduct focus groups and one-on-one interviews with youth in order to determine the appropriateness of the questionnaire designed for the cohort aged 18-20.
April 1998	Provincial Ministries and Departments Education (Deputy Minister Level), Provincial Working Group on Quality Improvement of Education Statistics, HRDC Forum of Labour Market Deputy Ministers, HRDC Advisory Panel of Experts on Youth and Learning, HRDC internal contacts, and Statistics Canada analysts were asked to provide comments on the YITS questionnaire for the cohort aged 18 to 20.
December 1998	Provincial Ministries and Departments of Education (Deputy Minister Level), Strategic Management Committee (Assistant Deputy Minister Level), Provincial Working Group on Quality Improvement of Education Statistics, HRDC Forum of Labour Market Deputy Ministers, HRDC Working Group on School-Work Transitions, HRDC Advisory Panel of Experts on Youth and Learning, HRDC internal contacts, contacts in the Canadian Teacher's Federation and Statistics Canada internal contacts were asked to provide comments on the YITS questionnaire for the cohort aged 15.
December 1998	The Statistics Canada Questionnaire Design Resource Centre was asked to conduct focus groups and one-on-one interviews with youth and parents to determine the appropriateness of the questionnaire designed for the cohort aged 15.
July 1999	Members of HRDC's Advisory Panel of Experts on Youth and Learning were asked to provide feedback on revisions made to the instrument for the cohort aged 18-20 following the field trial.
August 1999	Dr. Sid Gilbert of the University of Guelph and Herb O'Herron of the Association of Universities and Colleges of Canada were consulted on the refinement of the measurement of First Year Experiences following the field trial.

7.6 Field trials

Field trials of YITS instruments were performed with samples of youth across Canada. Field trials were used to evaluate implementation procedures and to extensively test the instruments. Results from analysis of the data collected through the field trials were used to refine the instruments for the main study.

The field trial of the YITS Youth Questionnaire for the cohort aged 18-20 was conducted in January and February 1999 with over 2,000 youth across Canada. The field trial of the PISA Assessment Instruments, PISA Student Questionnaire, PISA School Administrator Questionnaire and YITS Youth Questionnaire for the cohort aged 15 was conducted in 80 schools with over 2,000 youth across Canada in April and May, 1999. The YITS Parent Questionnaire was also administered to parents of youth aged 15 participating in the field trial. These telephone interviews were conducted in May and June, 1999.

7.7 Restrictions to Cycle 1 content

Factors influencing early life transitions, such as leaving secondary schooling and post-secondary entry, will be explored in greater detail among the cohort entering at age 15 than among the cohort entering at ages 18-20. This is because the content covered during the first cycle for the cohort aged 18-20 is broadly defined, requiring collection of information on both high-school and post-secondary experiences as well as labour-market experiences, and the overall length of the interview is limited. Interview length is limited because experience from administration of surveys at Statistics Canada indicates that it would be inappropriate to extend the interview beyond one hour. It would be difficult to encourage respondents to complete an interview exceeding one-hour and such an interview would be likely to discourage respondents from participating in future survey cycles.

The content of Cycle 1 for the cohort aged 15 is also restricted. Achievement tests and youth questionnaires associated with the Programme for International Student Assessment and Cycle 1 of the Youth in Transition Survey are administered to youth at school under the authority of Provincial Ministries or Departments of Education (see chapter 6: integration with the Programme for International Student Assessment). During a review of proposed content for

Cycle 1 conducted prior to the administration of the field trial, several jurisdictions indicated concerns with the collection of non-school related factors within the context of a school-based inquiry.

In order to address these concerns, questions related to substance use and illegal activities, peer influence with respect to substance use or illegal acts, pregnancy and questions related to traumatic events or home environment were removed from the Cycle 1 youth questionnaire. These themes will be considered for inclusion in Cycle 2, which will be administered within the household via a telephone interview (see chapter 10: methodology and implementation).

7.8 Cycle 1 content inventory available

An inventory of the content of Cycle 1, which includes abbreviated questions organized by content theme, is available on request (see chapter 12: project contacts). This inventory includes questions from the YITS questionnaire for youth aged 18-20, the YITS questionnaire for youth aged 15, the YITS questionnaire for parents of youth aged 15, the PISA questionnaire for youth aged 15, and the PISA questionnaire for school administrators of youth aged 15. Copies of the above questionnaires are also available on request.

8. Factors Influencing Transitions – Literature Review

8.1 Overview

An extensive review of the school-work transitions and youth development literature was conducted in support of the development of the YITS instruments. As was outlined earlier, both the late Dr. Sid Gilbert of the University of Guelph and Dr. Harvey Krahn of the University of Alberta were commissioned by Human Resources Development Canada in 1996 to consult the literature and inform on research needs (see chapter 3: consultation on information needs).

Content for Cycle 1 of YITS for the cohort aged 15 also includes data gathered through the OECD/PISA project. Content of the questionnaires included in PISA was elaborated by a team of international experts including Dr. Doug Willms of the University of New Brunswick.

In addition to these two projects, the YITS content development team also conducted a literature review. The following provides a brief overview of key findings from all of these exercises with respect to factors that may be feasible to examine through YITS.

8.2 School effects

"Internal organization features of schools can have significant educative consequences for all students, especially at-risk youth." (Bryk and Thum, 1989). Research has indicated that "after controlling for ability, knowledge and socio-economic status, some schools produce lower drop-out rates, less absenteeism, juvenile delinquency and better student achievement." (Gilbert and Welke,1997). The following are some of the school characteristics that have been identified as associated with positive student outcomes: supportive and caring teachers, teachers with high but realistic expectations of student achievement, stress on academic work, quality curriculum, monitoring of student progress, time-on-task dedicated to active teaching and learning, fair and clear rules of conduct, cooperative decision making among teachers and students, principals dedication to teaching and learning, and commitment to help students at risk of dropping out.

The purpose of school effects research is to assess the contribution of schools to student outcomes, to evaluate school practices and to determine the extent to which attending a particular school modifies students' outcomes. Essentially it involves determining the difference between

the performance of a child in a particular school and the performance that might have been expected if that child had been in some other setting. Recent studies of school effects (see Willms, 1992) use a statistical technique known as Hierarchical Linear Modelling (HLM).

This type of modelling is viable with data from Cycle 1 of YITS for the cohort aged 15. This is because schools are targeted as the primary sampling unit for this cohort of youth. Most of the information on school effects would be obtained from the PISA School Administrator Questionnaire, including supplementary Canadian questions. Themes covered include:

- basic school characteristics,
- level of school resources,
- quality of school resources,
- achievement orientation (admission policy, assessment practices),
- degree to which teachers participate in decision making,
- degree of student choice in school program,
- degree of streaming or tracking,
- teacher morale,
- school evaluation and monitoring practices,
- parental involvement,
- climate factors that may hinder learning,
- availability of co-op or work placement programs,
- availability of other special programs,
- school partnerships with business, and
- school practices to encourage at-risk students to stay in school.

Information on school effects that is available from the PISA and YITS Youth Questionnaires and from the YITS Parent Questionnaire is as follows:

- classroom climate,
- overall climate,
- level of teacher support,
- structured and adaptive instruction,

- clarity of rules,
- degree of choice in type of school, and
- computer availability at school.

8.3 School engagement

A student's engagement or involvement with school has been related to academic achievement and the probability of graduating from high school. It is thought to be a concept composed of several factors including a student's participation both academically and socially at school and a student's identification with their school in terms of whether they feel that they belong and whether they value their school experiences both currently and with respect to their future.

Based on in-depth research (in particular the work of J. Finn (1993), K. Voelkl (1996) and the Atlantic Centre for Policy Research in Education (University of New Brunswick, 1997)) and on consultations with these and other experts, the following model and components of school engagement were defined as follows for use with the National Longitudinal Survey of Children and Youth (NLSCY) (Norris, Pignal, and Lipps, 1998).

Academic engagement

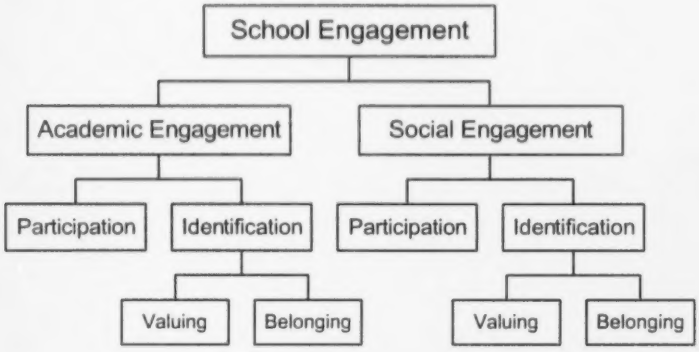
Academic engagement is defined as the identification with and behavioural involvement in the academic aspects of school. The academic aspects of school include students' dealings with teachers, curriculum, and school governance. Identification in the academic aspect can be further subdivided into two constructs: belonging and valuing. Belonging refers both to a sense of fit between students' perceived needs and the offerings of the school, and to students' perception that they are in an environment where they are cared about and respected. Valuing refers to students' endorsement of the goals of education in general and academics in particular. For example, valuing includes students' interests in and beliefs about the importance and relevance of academic achievement.

Social engagement

Social engagement is defined as the identification with and behavioural involvement in the social aspects of school. The social aspects of school are the informal, out-of-

classroom interests and activities associated with school. Some examples of the social aspects of school are students' relationships with peers, their extracurricular activities and their contacts with teachers outside of the classroom. Identification with the social aspects of school involves both a feeling of belonging and a sense of fit between the individual and the school's social environment. Valuing is the belief that being socially involved in school and interested in the social life of the school is important.

Figure 1: **A conceptual framework for school engagement**



The definition and constructs of school engagement presented in the model above were created by L. Barr-Telford and C. Norris at Statistics Canada and are based on the work of J. Finn (1993), K. Voelkl (1995), and the Atlantic Centre for Policy Research in Education (University of New Brunswick, Canada, 1997).

The Youth in Transition Survey has adopted the model and definitions of school engagement used for the NLSCY. This model has been the reference in choosing items and existing scales related to school engagement for inclusion in YITS. For the cohort aged 15, an adapted version of items developed by Jeremy D. Finn (Department of Counseling and Educational Psychology, State University of New York at Buffalo) for assessing the academic participation of young adolescents is included (J. Finn, Ed., 1993). Also included are selected items from Kristin Voelkl's Identification with School Scale that covers social and academic belonging and valuing dimensions of the model (K. Voelkl, 1996). To these scales were added a few additional items to

help round out the concepts in the model. Further contributing to the model are school engagement items included on the Programme for International Student Assessment (PISA) Student Questionnaire.[2]

A much smaller sub-set of items on school engagement is included on the questionnaire for the cohort aged 18-20. For this cohort, school engagement is assessed for the youth's most recent year in high school (or junior high or elementary school, if they did not get as far as high school) and for the first year of a youth's first post-secondary program.

8.4 Achievement

Cognitive ability as measured by marks or standardized achievement tests have been linked to future educational attainment and to labour-market earnings (Hanushek and Pace 1995; Schweitzer and all, 1995). In addition to these two factors, course choice or tracking has also been shown to influence educational outcomes (Murnane et al., 1995). West (1991) identifies being behind in grade level, not reading at the grade level, enrollment in general courses rather than college or vocational preparatory courses, and lower achievement as risk factors for high school non-completion. Overall academic achievement and participation in an advanced mathematics course were identified as among the strongest determinants of post-secondary participation (McGrath, 1996). Poor reading skills and low IQ scores have also been shown to have a significant contribution to increasing the risk of unemployment (A. Caspi, B. Wright, T. Moffitt and P. Silva, 1996).

Cycle 1 of YITS for the cohort aged 15 includes a 2-hour assessment of youth competencies in the domains of reading, science and mathematics via the OECD Programme for International Student Assessment (PISA). For both cohorts of YITS, information on overall high school marks and on high school marks and course levels in main-language and mathematics is collected. Similar information is also collected for science for the YITS cohort aged 15.

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[2] Valuable advice regarding the items chosen for assessing school engagement and related concepts was also given by Peter Dietsche, Director of Humber Research Network, Humber College, Ontario; the late Sid Gilbert, Professor, Department of Sociology and Anthropology, University of Guelph, Ontario; and Herb O'Heron, Association of Universities and Colleges of Canada.

Information on overall marks is collected for the first post-secondary year for the YITS cohort aged 18-20.

8.5 Parental Socio-economic status

Socio-economic status is a measurement designed to approximate the relative level of economic and social privilege of a household and their access to certain economic and social resources. Socio-economic status (SES) is cited in much of the literature on youth and education as a key variable related to differences in youth outcomes. In addition to using socio-economic status as an explanatory variable in analysis, it is also an important variable to use when isolating the effect of other factors on outcomes. Access to resources is expected to impact a youth's life, development, and transitions as it affects things like access to high quality education including post-secondary education, access to other learning resources (people, places, and things), and availability of personal contacts in positions of influence in the labour market, to name but a few.

Socio-economic status has been related to the likelihood of an elementary school child being in remedial or gifted education programs and of failing or repeating a grade (The Daily, Statistics Canada, April 17, 1997). Socio-economic status is a key variable correlated to school truancy (Sharples et al. 1979; Levine 1984), school completion (Statistics Canada, 1993), the nature and extent of career exploration (Grotevant and Cooper, 1988; Hageman and Gladding, 1983), educational and employment aspirations, and occupational status attainment (Gilbert and Welke, 1997 and Way and Rossmann, 1996). Family socio-economic status during the adolescent's formative period is seen as an important influence on post-secondary education participation, work decisions and ambition (McClelland, 1990; Owens, 1992; Butlin, 1999).

A socio-economic status score for a child's household is usually derived from the level of family income, the occupational category of one or both parents, and the education level of one or both parents using a standard method of ranking. Methods of calculating SES scores have evolved based on changes in research, in labour market patterns, and in data availability. The calculated scores are often grouped into a smaller number of categories for analytical purposes.

YITS for the cohort entering at age 15 includes measurement of family income, parental educational attainment and parental occupations within the YITS parent interview.

Measurements of parental educational attainment and occupation are also included in the questionnaire for the cohort aged 18-20.

8.6 Social and cultural capital

The concept of socio-economic status can be further broadened beyond occupation, income and education of parents to also include other forms of capital, such as social capital and cultural capital. Social capital can be defined as social relations that become an asset and that lead to action. Examples of social capital include a positive parenting style that leads to educational success, community social networks that help to encourage "at-risk" youth to stay in school, and teachers providing care and concern that help students develop positive educational aspirations. Cultural capital includes knowledge of, or association with, some aspect of high status culture. Examples of high status culture include attending an opera or listening to classical music.

Three forms of social capital include the following.

> The first form - obligations, expectations and trustworthiness of structures - relies on the notion of social exchange: when one individual does something for another, it establishes an expectation in the giver and an obligation in the receiver...Social capital also entails information channels. People use social relations to keep informed... Norms and effective sanctions are the third form of social capital... (Willms, 1999).

Family social capital can be operationalized with measures of the quality and amount of time parents spend with their children and one another (Willms, 1999). Included on the PISA Student Questionnaire are items measuring youth's perception of the frequency that they engage in a series of activities with their parents. Measures of parental involvement are also included on the YITS parent questionnaire (see section 9.8 parental involvement and parenting styles).

Community social capital, the norms, social networks and social relations of adult members in a community are considered an important determinant of children's educational success (Smith, Beaulieu and Serephine, 1995). Community social capital has also been found to help "at-risk" youth (Ferstenberg and Hughes, 1995). The PISA Student Questionnaire includes measures of interaction between youth and selected family members and friends of parents. The YITS parent questionnaire also includes measures of community social capital. The social networks of youth

are also proxied by measurement of involvement in extra-curricular activities organized by the school and offered in the community on the YITS Student Questionnaire.

If family social capital is lacking, community social capital may be able to make up the difference and may also be enough to keep children in pursuit of educational success. If, however, there is a decline in community social capital, for example, a family move, it has been found to have significant effects on children's educational attainment (Smith, Beaulieu, Isreal, 1992; Teachman, Paasch, and Carver, 1996 and 1997). The situation is worse if community social capital is lost because of family migration, and family social capital is lacking because of parental disinterest and lack of support (Hagan, MacMillan and Wheaton, 1996). The YITS parent questionnaire also collects information on the frequency of family moving.

Cultural capital includes knowledge of or association with some aspect of high status culture. Cultural capital has been associated with achievement and has been identified as a predictor of future income (Dimaggio, 1982; Lareau, 1987; Borocz and Southworth, 1996). The PISA Student Questionnaire includes items measuring aspects of cultural capital.

8.7 Family and custody history

Family and custody history includes information on guardianship, marital and common-law breakdown of parents, contact with non-custodial parents, death of parents, parental re-marriage or formation of new unions, and family blending. This information is collected directly from the parent identified as being most knowledgeable about the child during Cycle 1 of the cohort entering at age 15.

Family disruption is not uncommon in Canada and has been identified as a contributor to more difficult transition experiences. In 1994-95, one-quarter of children under age 12 were no longer living with both original parents (Marcel-Gratton, 1998). Young people who have experienced marital breakdown or other family disruption are more likely to leave high school before graduation (Kiernan, 1992; Wehlage et al., 1989; West, 1991). Young people with these experiences are also more likely to leave the parental home by age 18 and to report leaving under adverse circumstances (Kiernan, 1992). Family disruption is also related to a greater incidence of academic difficulty (Ross, Roberts and Scott, 1998), to school absenteeism (Harte, 1994), to

youth homelessness (Jones 1993), and to increased risk of unemployment (Caspi et. al, 1996). Numerous other studies have also linked family disruption to developmental difficulties and poor educational attainment.

8.8 Parental involvement and parenting style

Parents who are supportive of their youth's education, who are involved in their youth's school and who have a firm but responsive parenting style have a positive influence on their youth's achievement and educational attainment.

Aspects of parental behaviour that have been linked to school success include monitoring of children's behaviour, providing help with school work and discussing school experiences and future educational plans (Amato and Ochiltree, 1986; Milne et al., 1986; Hoover-Dempsey et al. 1987; Stevenson and Baker, 1987; Lin and Atken, 1989; Campbell and Mandel, 1990; Muller, 1993; Keith et al., 1993).

The style of parental monitoring has also been found to have an impact on school success. Authoritarian and permissive parenting styles have been negatively associated with school performance, while an authoritative parenting style has been associated with achievement and progress (Baumrind, 1983, 1991; Hess and McDevitt, 1984; Dornbusch et. al, 1987; Feldman and Wentzel, 1990; Wentzel et al., 1991; Steinberg et al., 1991; Steinberg et al. 1992). As Gilbert and Welke (1997) note:

> When parents exercise firm control of adolescent behaviour through clear standards, but with open discussion and input, allowing decisions to respond to student needs and desires, school performance is enhanced.

Measures of parental involvement and parenting style are included on the PISA Student Questionnaire and the YITS parent questionnaire for the cohort aged 15.

8.9 Balancing work, education and family

Women, more than men, have a tendency to adjust career and educational aspirations and plans to accommodate future family-related responsibilities (see section 9.10 education and labour-market aspirations). Once children are born, parents must balance competing demands for their

time. Results from an examination of progression through university in Ontario indicated that women were more likely than men to study part-time and to take leaves of absence from their program. Women were also more likely than men to report having done so for family-related reasons (Chen and Oderkirk, 1997). While less common than in the past, some parents withdraw from the labour-force when children are young and many continue to engage in labour-market activities, but with reduced working hours (Oderkirk, Silver and Prud'homme, 1994). Responsibilities associated with elder-care or care for family members with special needs can also impact on educational attainment and attachment to the labour force.

Balancing work, education and family is particularly difficult for people who become parents during adolescence. McAlpine et al. (1996) note that "women who have their first child during adolescence face an accelerated transition into adulthood often characterized by economic and social disadvantage." These women are more likely than other women to have lower educational attainment, lower labour-force participation, higher fertility, less marital stability and lower incomes. (Chilman, 1980; Grindstaff, 1988).

YITS for the cohort aged 18-20 contains information on household formation and birth of dependent children. YITS for the cohort aged 15 will also begin to collect such information when youth are aged 17 and older.

8.10 Education and labour-market aspirations

. . . of youth

Several studies have shown that, overall, Canadian youth have high occupational aspirations and that most view their careers in middle-class, white-collar terms (Baker, 1985: Empson-Warner and Krahn, 1992; Thiessen and Looker, 1993). Women, however, are more likely than men to confine themselves to a range of occupations considered traditionally suitable for females and to consider potential future family responsibilities when making decisions about school and work (Looker, 1993; Erwin, 1996). Youth growing up in rural areas are also more likely to have lower educational aspirations than their urban peers (Looker, 1993).

Studies have linked youth's educational and career goals to the decision to pursue post-secondary education and to progress at the post-secondary level (Krahn, 1996). The development of

aspirations has been identified as one of the most significant determinants of eventual educational attainment (Gottfredson, 1981). Progress within post-secondary programs has also been linked to aspirations at the point of entry (Campbell et al., 1984; Grayson, 1996; Gilbert et al., 1997). Aspirations also play a significant role in intervening between first job characteristics and later occupational status (Raelin, 1980). The higher the aspirations, the greater the chances of obtaining a high-level job later on. Aspirations have been shown to be so important that they constituted one definite way to overcome a low-level first job with respect to later employment.

The presence of education and career aspirations are linked to educational attainment and career progression. Not all aspirations, however, can be fulfilled. "While high educational attainment is valued by family, peers and teachers, the promise can not always be fulfilled at the individual or collective level. Not everyone can achieve or reach the highest levels and labour markets can not always accommodate all those who do. The result may be severe disappointment, frustration or rejection during the initial transition from school to work or post-secondary education." (Gilbert and Welke, 1997)

. . . of parents for their youth

Youth aspirations are influenced by parental aspirations. In all of the studies Krahn reviewed relating youth aspirations to attainment, family background was found to be an important determinant (Krahn, 1996).

High parental aspirations and expectations have been found to have an impact on children's school achievement (Gilbert and McRoberts, 1977; Porter, Porter and Blishen, 1982; Wagner and Spratt, 1988; Ainely et al. 1991). There is also indication that school achievement may be more strongly related to parental aspirations and expectations than to parental socio-economic status (Reynolds and Walberg, 1992; Gilbert and McRoberts, 1997).

YITS for both cohorts contains information on youth's education and career aspirations. YITS for the cohort aged 15 also contains information on attitudes and beliefs that may shape aspirations and influences on aspirations.

YITS for both cohorts contains information on the youth's perception of the educational aspirations their parents hold for them. YITS for the cohort aged 15 also queries parents about their educational aspirations for their children.

8.11 Career planning

Research suggests that when making career choices, individuals pass through specific developmental sequences or stages, each characterized by specific tasks, decisions, or adjustments. Crites indicates that the stages of career development begin with the awareness of self and the world of work, otherwise called the exploration stage. This is followed by development of specific skills or competencies associated with career decision-making, and development of attitudes promoting a willingness to engage in career development activities (Crites, 1961 and 1978).

Based on over 15 years of research, Crites proposes that the career exploration stage begins at a young age and continues through adolescence. At this stage, youth explore various occupational possibilities, educational alternatives and the many paths that might be followed. As individuals age, mature and acquire more life experiences, they pass to the next stage of career development.

Some studies have shown that individuals who do not complete the initial stages of career development, that is knowing themselves and knowing about jobs, have difficulty or delay the process of choosing a job or a career and planning future education and work (Hiebert et. al, 1990). Lack of career direction and insufficient knowledge of occupations and educational options have been identified as factors impeding post-secondary participation (McGrath, 1996).

YITS for the cohort aged 15 collects some information related to early exploration of educational and career pathways. This information will be expanded in future survey cycles.

8.12 Influence of peers

Several studies have noted a relationship between education and career choices of youth and the support of friends for these choices (Owens, 1992; Sharpe and Spain, 1991). There is also evidence that the effect of family background on outcomes diminishes as youth age and that the influence of peers becomes stronger (Tinto, 1987). The use of cigarettes and the usage of drugs

and alcohol by friends have also been correlated with negative behaviours and outcomes, such as delinquent behaviours and poor school performance (Statistics Canada and Human Resources Development Canada, 1995).

YITS for the cohort aged 15 contains items on the influence of peers. Both YITS cohorts have a question on the educational aspiration of peers.

8.13 Disobedient behaviour

Leavers are more likely than graduates to engage in activities that involve a degree of rebellion or insubordination. These activities include truancy or school absenteeism, regular alcohol consumption, and soft and hard drug use. (Statistics Canada, 1993) Truancy or school-absenteeism, in particular, is among the factors most frequently cited in the literature as determinants of high school non-completion (Statistics Canada, 1993; Wehlage et al. 1989; West, 1991).

In 1991, leavers generally reported having engaged in these practices more frequently and regularly than did their graduate counterparts. Also, since some of this behaviour is beyond the limits of the law and may lead to other illegal activities, leavers also had higher rates of criminal convictions than graduates. Participation in such activities may not necessarily lead to the decision to leave school. Rather, these deviant behaviour patterns may be an indication of students at greater risk of leaving school prematurely (Statistics Canada, 1993).

Information on this theme is limited in YITS Cycle 1 for the cohort aged 15, although items may be included in future Cycles (chapter 7: survey content). YITS 18-20 includes items on alcohol and illegal drug use during high school. Both YITS cohorts contain information on frequency of skipping classes during high school. YITS for the cohort aged 15 also collects information on longer-term absences from school.

8.14 Health and psychological functioning

Health, both physical and mental, has been linked to academic achievement and educational attainment. In addition, personality traits play a role in student outcomes. Wehlage et al. (1989) associates health problems, both mental and physical, and learning disabilities, as among the

most common correlates of school non-completion in the literature. Similarly, there are more barriers to high school completion and to access to post-secondary education for youth with disabilities than exist for other youth (Hill, 1996).

"Self-esteem, confidence, control, maturity, anxiety, depression and emotionality are all associated with school performance or progress" (Forehand et al. 1988; Beer, 1989; Grolnick and Ryan, 1989; Amato, 1989). Personality and motivational factors have also been associated with post-secondary success (Astin, 1993). The presence of significant others, especially parents and friends, and encouragement are also related to attainment (Looker and Pineo, 1993).

Among the psychological difficulties associated with school leavers are feelings of social isolation and poor self-concept (Wehlage et al. 1989). Also, research has indicated that youth at risk lack a sense of mastery over their lives, attributing success or failure to external factors, such as luck, rather than to their own efforts (Greer, 1991).

YITS for the cohort aged 15 includes the following four scales: social provisions, which focuses on relationships with others and support, (Curtona and Russell), self-esteem (Rosenberg, 1965), mastery (Pearlin and Schooler, 1978) and school-related self-efficacy (adapted from Pintrich and De Groot). YITS for the cohort aged 15 also includes information from parents on long-term physical or mental conditions and the nature of those conditions, including learning problems.

YITS for the cohort aged 18-20 asks youth directly about perceived activity limitations resulting from long-term mental or physical health problems. Cycle 1 for this cohort does not include any other measurement of psychological functioning.

8.15 Post-secondary financing

Financial constraints were identified by McGrath in his study of Newfoundland youth as being one of the strongest barriers to post-secondary participation (McGrath, 1996).

Research indicates that universities are increasingly relying on student fees and that the relative cost of attending university is rising (Little, 1997). Consequently, increases in student borrowing under the Canada Student Loan Program have been noted as well as increases in the proportion of borrowers with difficulty re-paying loans (Plager and Chen, 1999).

Findings from McGrath indicate that many students believe that the Canada Student Loan Program will not adequately meet their needs. "Access to loans will likely become even more of a crucial factor in the decision of future high-school graduates to enter post-secondary education...A trend may be emerging where there may be a reduction in demand due to increasing hesitation by students to accumulate large debts." (McGrath, 1996).

YITS for the cohort aged 18-20 queries respondents about post-secondary financing including loans and scholarships, grants and bursaries. Also included are questions on the accessibility of loans. YITS for the cohort aged 15 includes questions on parental financial preparation for post-secondary education. Detailed questioning related to post-secondary financing will be included in Cycle 2 for this cohort.

8.16 Experiences during the first post-secondary year

After students have made the transition to post-secondary education, factors related to school experiences have a strong influence on student progress (Tinto, 1987; Pascarella and Terenzini, 1983; Grayson 1996). Non-completion of university, in particular, has been found to be more strongly influenced by factors introduced during the first year, than by pre-enrollment factors, such as family socio-economic status or high school achievement (Gilbert and Welke, 1997).

Factors associated with the transition from high school to university include increased academic challenge, reduced academic self-esteem, assimilation of new norms and values, disruption of ties to former peers, formation of ties to a new peer group, novel living arrangements, sudden anonymity, threat to self-image, longing for home and severe and on-going stress (Benjamin, 1990). Studies conducted at Canadian universities have identified workload, access to specific courses, concerns about expectations of family and friends, financial worries, and finding suitable accommodation among the most common difficulties experienced by students during their first year (Gilbert et. al, 1997).

Nonetheless, while it is likely that all students experience some difficulty adjusting to the first post-secondary year, some will persist to graduation and others will not. Studies at several Canadian universities have identified the following factors associated with post-secondary withdrawal: feeling inadequately prepared, dissatisfaction with quality of instruction, belief that

the institution was not concerned with them as individuals, lack of motivation, lower academic participation and lower achievement (Gilbert et al., 1997).

Information on experiences during the first year of the first post-secondary program is collected in YITS for the cohort aged 18-20. This information will also be included on Cycle 2 of YITS for the cohort now aged 15.

8.17 Skills

The development of job-related skills during high school or university likely contribute to the adjustment of the student as they move through transitions from school to work, or work to school (Gilbert and Welke, 1997). The importance of skills was emphasized by the Policy Research Committee "...the new economy requires broad and highly transferable skills such as problem-solving, reading, numeracy, writing, oral communication, information technologies and the ability to learn. Despite the rising levels of education within the Canadian population, wide gaps exist between the less and more highly educated. Many students do not complete high school and many leave without a sound foundation in basic skills" (Privy Council, Policy Research Committee, 1996). Skills are acquired formally, through educational programs, and informally, through work experience and volunteer activities, for example.

YITS collects information on formal credentials from secondary programs and all post-secondary programs. This includes, at the post-secondary level, major field of specialization. YITS also collects information on participation in work-place training programs and a window into the types of skills acquired through this type of training. In addition, YITS for the cohort aged 15, collects information on skills acquired through school, work and volunteer experiences that may be associated with achievement, educational attainment and ease of entry into the labour market. Detailed information on information technology skills is also collected as part of YITS for the cohort aged 15 through the PISA international option on information technology. YITS for the cohort aged 18-20 includes information on self-rated ability with respect to literacy, numeracy, and problem-solving. Perception of competency in these areas has been linked to higher educational outcomes (Gilbert and Welke, 1997).

As was mentioned in the section on achievement, the PISA assessment of youth competency in reading, science and mathematics for the cohort aged 15 and information on school marks in these domains from YITS for both cohorts contribute to the measurement of reading and numeracy skills.

8.18 Work preparation programs

Programs for preparation for work help students to be job-ready in specific skill areas, combining classroom study with on-the-job training. Students obtain skills on the front lines, while reinforcing what they have learned in the classroom through practical application. Experience comes through work terms or assignments where students actually spend time with an employer or, through a classroom environment, with the employer visiting the school for an extended period. Work terms or assignment periods can range from a few weeks to one year or more, and can take place through secondary or post-secondary institutions.

Bridging the gap between school programs and industry needs may result in more successful transitions from school to work. In 1996, the Council of Ministers of Education, Canada (CMEC) noted a new focus on transition programs - programs for preparation for work - designed to help students move from school to the world of work (CMEC, 1996). Two years later, jurisdictions were continuing to seek more effective linkages between the education sector and the labour market, and to refine programs that will help prepare students move into productive careers (CMEC, 1998).

In addition to facilitating the transition from school to work for students who are comfortable at school, work programs can also help schools retain students at risk of dropping out. Through the implementation and expansion of apprenticeship, mentoring, cooperative education, school-based enterprises / entrepreneurship, internships, practicums, technical preparation, community-based volunteering and work simulation programs, it is believed that students are better able to match their intellectual capacity with an appropriate method of learning (Smith and Rojewski 1993; Cheek and Cambell, 1994; Hamilton and Hamilton, 1994).

Cycle 1 for the cohort aged 15 collects initial information on participation in co-op programs at the high school level. School administrators are also asked about the availability of, and student

participation in, co-op or work education programs. As exposure to such activities will increase with age, Cycle 2 for the cohort aged 15 will explore participation in high-school based work preparation programs in greater detail.

Cycle 1 for the cohort aged 18-20 collects information on participation in programs at the high school level and post-secondary level where students have the opportunity to spend time with an employer. YITS also collects detailed employment information on paid co-op experiences of youth occurring within the past year.

8.19 Volunteer activities

Volunteer activities, like programs for preparation for work, are thought to ease the transition from secondary school to work or to post-secondary education. The merits of volunteering include developing interpersonal skills, communications skills, organizational and managerial skills. Volunteer activities may leave youth more qualified and, therefore, more prepared to meet the school-work transition. Through volunteering youth gain work experience and may develop contacts or networks that could help them secure employment in the future.

In his discussion paper on School-work Transitions, Krahn says its difficult to find research that supports these outcomes (1996). While he found studies that explored the topic, none addressed the question of whether volunteering had an impact on students' employment prospects.

More recently, results from the National Survey of Giving, Volunteering and Participating indicate that for young adult Canadians volunteer work can ease the transition to paid employment and does help youth acquire work experience and new skills (Statistics Canada, 1998). Youth typically volunteer to improve job opportunities, to explore their own abilities and to use their skills and abilities.

YITS ask both cohorts about participation in volunteer activities.

8.20 Early employment experiences

Youth are increasingly entering the labour market at older ages. This is either the result of a preference to concentrate on schooling or difficulties in securing a first job. Among youth aged 17-19, the proportion reporting never having held a job increased to 26% in 1998 from 9% in

1989. Over the same period, the proportion of youth aged 20 to 24 who never worked rose to 8% from 2% (Statistics Canada, Labour Force Update, 1999).

The trend toward staying in school longer and withdrawing from the labour market may be viewed as positive, allowing youth to concentrate efforts on building skills through education. One result, however, is that youth are less likely to have any work experience. Without work experience, youth risk getting trapped in a cycle of "no job, no experience, no experience, no job" (Statistics Canada, Labour Force Update, 1997).

Employment not only provides youth with valuable work experience and skills, it is a source of revenue. As tuition fees continue to rise and household incomes stagnate or even decline, student wages are an increasingly important determinant of participation in post-secondary education (Marquardt, 1998).

In a Communiqué released by the Canadian Council on Social Development in January, 1999, Dr. Jean Kunz stated that "Increasingly, teens are being denied the opportunity to acquire job skills, to earn their own spending money, or to earn funds for their post-secondary studies." In a press release, Dr. Kunz further commented that "a resume that includes scooping ice cream, painting houses or babysitting is often considered a plus when employers evaluate candidates fresh out of school." and that "a job provides interpersonal skills and some experience of what life is like in the workplace."

YITS for the cohort aged 15 explores early employment experiences of youth including employment during the summer and during the school year.

YITS for the cohort aged 18-20 collects more limited information on the incidence of combining work and school during the last year in secondary schooling and during the first year of the first post-secondary year.

8.21 Combining work and school

For many years there have been debates about the costs and benefits of holding a job while attending school. As with participants in programs for preparation for work and volunteer activities, students with part-time employment gain valuable skills that may ease future school-

work transitions. For some students, however, part-time employment may have a negative impact on educational outcomes (D'amico, 1984).

Research results from the 1991 School Leavers Survey found that the majority of all secondary students held jobs during their final year of school. Students who worked more than 20 hours per week during the school year, however, were less likely to complete secondary schooling than were those who worked fewer hours (Statistics Canada, 1993). Similarly, longer working hours have been shown to have a negative impact on the academic performance of racial minorities in the United States (Oettinger, 1999).

YITS for the cohort aged 15 explores employment during the school year including intensity of work and perceived impact of work on school performance. YITS for the cohort aged 18-20 collects information on intensity of work during the last year in secondary schooling.

8.22 Unemployment

Unemployment among young people can have long-term economic and social consequences, particularly if the duration of spells of unemployment are long. Corack and Heisz (1995) point out that, while the unemployment rate is one of the most closely watched economic indicators, on its own, it offers an incomplete picture of the labour force. An unemployment rate of 10 per cent may reflect a situation on which 10 per cent of the labour force becomes unemployed each month and spends only a few weeks looking for a job, or a case in which the same 10 per cent is unemployed for the entire year. In the first case, the labour market is simply characterized by a great deal of movement of persons in and out of the state of unemployment, while in the latter, it is a stagnant market with unemployment implying "severe hardship" (Corak and Heisz, 1995).

The period immediately following entry into working life exerts a strong influence on subsequent attitudes to employment. Prolonged unemployment can lead to resentment directed not only at specific employers, who have rejected job applications, but also at employers in general. This resentment can result in individuals who express a lack of motivation, or an uncooperative or even disruptive behaviour in the workplace, after securing employment (Casson, 1979).

YITS for the cohort aged 18-20 collects information on the duration of time from completing education to obtaining employment, and will measure the duration of episodes of unemployment. YITS for the cohort aged 15 will collect this type of information beginning in Cycle 2.

8.23 Job quality

What determines job quality? "Bad jobs" have been characterized, from a macro-economic point of view, as jobs with relatively low-pay, poor benefits coverage, and high incidence of contingent work. Some other perceptions of "bad jobs" are jobs that are temporary in nature, part-time jobs, jobs with irregular working hours, and those with week-end work and night shifts (Economic Council of Canada, 1990; Statistics Canada, 1998). For others, a job of low quality may be one that does not match an individual's skills or abilities or provide compensation commensurate with skills and abilities.

YITS for the cohort aged 18-20 and Cycle 2 for the cohort aged 15 collects information on the duration of episodes of employment combined with the characteristics of each employment experience including occupation, industry, hours of work, temporary or permanent status, initial earnings, current or final earnings, reservation wage, and job satisfaction. Combined with information on skills, this provides a rich set of information on which to explore this question. Further indicators of job quality will be developed for future cycles.

Three of the indicators of job quality are explored in greater detail below: job tenure (or mobility), earnings or reservation wage, and job satisfaction.

8.24 Job tenure/mobility

Research into school-work transitions frequently claim that a transition has been successful when the outcome is into a full-time job that will be of a "long" duration (Hall, 1982). Critics to such interpretations warn, however, that young people frequently engage in "job shopping," moving from one short term job to another seeking a match to their interest and skills. This activity reflects a productive job search and in no way reflects a difficult transition (Topel and Ward, 1992). Young workers may also be able to build a portfolio of marketable skills through a variety of work experiences.

There are youth, however, who do experience "difficult" transitions as they move from one dead-end job to another (Klerman and Karoly, 1994). Analysis of data from the US National Longitudinal Survey of Youth indicates that male high school dropouts took longer than high school graduates to obtain a job which they would keep for a long time (Bureau of Labour Statistics, 1998). Wages and possibly work skills can also be lost if periods of unemployment occur in between job changes.

YITS collects information on the employment history of youth including job duration and characteristics, such as, whether the job was permanent or temporary, part-time or full-time, and hours of work. Thus, information collected will permit analysis of job tenure and job mobility and an exploration of determinants of job mobility.

8.25 Earnings and reservation wage

Wages are affected by factors such as industry of employment, level of education, union contracts, government employment, employment experience in the same industry and duration between jobs or between schooling and the first job.

In a job market that is rapidly changing, where employers are seeking more highly skilled, educated and experienced workers, and where youth unemployment is high, young workers face tough competition when seeking jobs. In this environment, the extent of "job shopping" that youth are able to engage in may be restricted (see section 8.24 job tenure). Certainly, youth constrained by financial responsibilities may not be able to afford to wait for a job that provides the best match to their skills and abilities or that provides the best compensation.

Reservation wage represents a worker's asking wage. The theory of job search states that the duration of unemployment spells and the reservation wage move together. Other things being equal, the higher one's reservation wage, the longer an unemployment spell will be. Thus, duration of unemployment may be given further context with this information.

Theory states that imperfections in the labour market generate a diversity of wages for a given type of skill. Given the absence of complete information about the distribution of wage offers, it would benefit an unemployed individual not to automatically accept the first wage offer, but to search for an appropriate offer. To maximize gain from this exercise, the individual would need

to balance the expected gain from additional searching against the cost of the extra search. The wage offer at which this balancing occurs is defined as the reservation wage. Wage offers below the reservation wage would be rejected, and the first one equal to or exceeding the reservation wage would be accepted (Hansan and Surendra, 1979; Feldstein and Poterba, 1982; Jones, 1987; Jones, 1988).

Adequacy and stability of earnings may influence many major life decisions, such as participation in post-secondary education, the decision to leave the parental home and the timing of marriage and the birth of children, and has major implications for quality of life. YITS collects information on initial employment earnings at job entry, earnings at job termination and current earnings. In addition, specific questions are asked about youth's reservation wage.

8.26 Job satisfaction

Job satisfaction can be understood as a perception that is based on exposure to new information following the acceptance of a job. The initial acceptance of a job being an expression of satisfaction (Lévy-Garboua and Montmarquette, 1995).

For those employed within a job, measurement of perceived satisfaction may provide an indication as to their concept of the quality of the job and the appropriateness of the job for them. Levels of job satisfaction have been related to workplace absenteeism and job turnover (Andrisani, 1978; Raelin,1980).

YITS queries respondents about overall job satisfaction and satisfaction with employment earnings.

9. Research Questions

A longitudinal survey that follows the same panel of respondents over several years, permits exploration of the diversity of pathways followed, outcomes, and factors contributing to outcomes. The following is a list of examples of possible research questions that could be examined with data from YITS. Questions are organized according to the age of panel participants.

Youth under age 18

- What determines achievement: schools, parents, youth?
- What is school engagement and how does it explain differences in achievement?
- How informed are youth about their labour-market and educational options?
- Combining school and work: what are the costs and benefits?
- Attitudes and aspirations: what are they and what are the determinants?
- What is the relationship between information technology skills and school engagement and school achievement?

Youth aged 18 to 20

- Dropping-out of high school: what are the numbers and what factors influence it?
- Who chooses post-secondary education and what factors influence this decision?
- What are the determinants for first year withdrawal from post-secondary? Who drops out?
- How long does it take to find a first job after leaving full-time schooling and what are the determinants?
- What are the pathways and what are the determinants for employment experience of youth not in school?
- How close is the relationship between attitudes and aspirations in adolescence and outcomes?

Youth over age 20

- Who returns to full-time schooling after leaving for the labour market and what is the outcome?
- What post-secondary educational pathways are youth following?
- Who has access to employer-training and what is the impact on career development?
- How long does the transition from school to work really take?
- What are the long-term consequences of spending a number of years in the part-time/temporary labour market?
- How do educational and labour-market pathways impact on decisions about marriage and parenthood or on patterns of participation in the broader community?
- How effective are current school-based work-experience and employability skills programs?
- How do educational and labour-market pathways differ for youth living in rural communities, women, visible minorities or those whose behaviour during secondary school placed them in the category "at-risk"?
- How do additional investments in education "pay off" with respect to income and employment security?
- What is the relationship between education and labour-market aspirations in adolescence and eventual career and educational pathways?
- Does volunteering improve one's chances of finding employment?
- What is a successful transition to the labour market?
- Who experiences a "successful" transition and what are the determinants?
- What factors influence job tenure?
- To what extent have young people been able to establish financial independence from parents and from the state? What are the determinants?

10. Methodology and Implementation

In Canada, education is a provincial jurisdiction and there are considerable differences among provinces in programs offered. Thus, the most important estimates from YITS must be reliable enough to permit analysis at the provincial level. To provide policy-relevant information, characteristics of sub-groups, especially those "at risk," such as high-school leavers, are also required. In addition, estimates of key characteristics must remain reliable throughout future survey cycles.

10.1 Cycle 1: Cohort entering at age 15

The target population for the cohort entering at age 15 are youth born in 1984 who are attending any type of schooling in Canada. In accordance with requirements of the OECD PISA project, the sampling plan is a two-stage probability sample. With this type of sampling plan, which enables future modelling of school effects, schools are selected at the first stage and then students are selected from schools at the second stage (see chapter 5: project design). Approximately 30,000 youth aged 15 from 1,000 schools participated in Cycle 1.

Data for Cycle 1 was collected only in the ten Canadian provinces. Schools located on Indian Reserves were excluded. Also excluded were various types of schools for which it would not have been feasible to administer the survey, either because of the nature of the programs offered or the characteristics of the students instructed at those schools. This includes schools for children with severe learning disabilities, schools for blind and deaf students and home schooling. In total less than 4% of Canadian youth aged 15 were excluded.

Provincial Ministries and Departments of Education provided recent lists of schools in which 15-year-olds were enrolled. These lists, along with education data collected independently by Statistics Canada, were used to create a school sampling frame. In accordance with the requirements of the OECD PISA project, and to ensure the viability of school effects modelling, a maximum of 35 students were selected to participate per school. In schools with fewer than 35 students aged 15, all students aged 15 were selected.

The sample design was driven by the requirement for reliable estimates at the provincial level. In addition, Nova Scotia, New Brunswick, Quebec, Ontario and Manitoba required estimates for the PISA assessment by language of instruction of the school (English or French). In provinces with a small population of students aged 15 or small populations of students aged 15 in a particular language group, samples of more than 35 students per school were necessary.

Students selected to participate in Cycle 1 completed the PISA assessment, the PISA Student Questionnaire and the YITS Student Questionnaire at school. The total time for this administration was three hours. Following the administration at school, parents of selected students were asked to participate in the YITS parent interview. This 30-minute interview was administered over the telephone. School administrators were also asked to complete the PISA School Administrator's Questionnaire. This questionnaire was estimated to have taken 30 minutes to complete.

The collection period for the school component was from April to May, 2000. Parent interviews were conducted from May to August, 2000.

10.2 Cycle 1: Cohort entering at ages 18-20

The target population for this entry cohort was youth born in 1979 to 1981. The frame for this survey was developed from Statistics Canada's Labour Force Survey (LFS) and includes households that had participated in the LFS over the past three years with one or more youth in the target population.

The sample design was similar to that of the LFS, with an additional stage of sampling to select a respondent in households with more than one youth in the target population. Selected participants were interviewed regardless of their usual place of residence at the time of the YITS collection, provided they were living in Canada or the United States.

The geographic scope of the sample was limited to the ten provinces. Individuals living on Indian Reserves, in care and treatment facilities and in correctional facilities were excluded from participation.

Data collection for the cohort entering at ages 18-20 was administered, from January to March 2000, via a computer-assisted telephone interview. Interviews were completed with 23,000 youth.

10.3 Future cycles

As the plan for the longitudinal survey includes contacting respondents every two years, the second survey cycle will be in 2002. At that time, the survey for both age cohorts (ages 17 and 20 to 22) will be administered in the household. There will be no administration at school and there will not be a parent interview. For Cycle 2 and future cycles, respondents from both cohorts will be asked to participate in a computer-assisted telephone interview.

By Cycle 2, the YITS survey could experience problems unique to a longitudinal design, including telescoping and seam difficulties. Telescoping occurs when respondents report in one reference period events which occurred in another reference period. Seam problems result when there are abnormally large amounts of change or transition occurring at the seam of two periods compared to changes within a period. YITS will limit exposure to these difficulties through the use of dependent interviewing. Dependent interviewing occurs when the interviewer feeds back information collected in the previous interview to the respondent, placing the respondent in the correct reference period. This technique can be implemented with a computer-assisted interview.

YITS may also experience attrition between survey cycles. Two actions have been taken to minimize the impact of attrition. The first is the collection of the participant's mailing address and civic address and, also, the name, address and phone number of a family member or friend. The second is a plan to maintain contact with respondents during the period between interviews, through letters and information pamphlets that include change of address cards. As some attrition from a longitudinal panel is expected, survey weighting will be adjusted to account for it.

11. Data Availability

Following collection, the data are cleaned and validated, derived variables useful for analysis are created, information on occupations and fields of educational specialization are assigned codes and documentation to facilitate analysis is prepared.

Primary results from Cycle 1 are expected to be available in late 2001.

12. Project Contacts

Readers requiring additional information can contact the following people or visit the website at www.pisa.gc.ca.

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Appendix I

HRDC Advisory Panel of Experts on Youth and Learning

As was described in the report, the development of YITS has benefited from the contribution of members of the HRDC's Advisory Panel of Experts on Youth and Learning. Since 1997, the following people have participated in this panel:

Lesley Andres	Assistant Professor Department of Educational Studies University of British Columbia
Robert Crocker	Professor Faculty of Education Memorial University of Newfoundland
Jane Gaskell	Professor Faculty of Education University of British Columbia
Doug Giddings	Consultant on education and labour-market policies and issues
Sid Gilbert (deceased)	Professor Department of Sociology and Anthropology, College of Social Science University of Guelph
Norman Henchey	Consultant on educational issues
Doug Hodgkinson	Coordinator Research and Statistics Council of Ministers of Education, Canada
Harvey Krahn	Professor Department of Sociology University of Alberta
Stephen Lawton	Professor Department of Theory and Policy Studies in Education University of Toronto
Clément Lemelin	Professor Department of Economics University of Quebec at Montreal
Dianne Looker	Professor and Head Department of Sociology Acadia University

Noah Meltz	Professor and Principal Woodsworth College
Claude Montmarquette	Professor Department of Economics University of Montreal
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Victor Thiessen	Professor and Head Department of Sociology Dalhousie University
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